

CHEPEL', Vladimir Mikhaylovich; LAPER'YE, I.R., nauchnyy red.; DAYEV,
G.A., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Combustion of gases in boiler furnaces and ovens and servicing
of gas systems of enterprises] Szhiganiye gazov v topkakh kotlov
i pechai i obsluzhivaniye gazovogo khoziaistva predpriyatii. Izd.
2., ispr. i dop. Leningrad, Gos.nauchno-tekhn.izd-vo nef. i
gorno-toplivnoi lit-ry, Leningr.otd-nie, 1960. 375 p.

(MIRA 13:1)

(Gas as fuel)

CHEPEL', Vladimir Mikhaylovich; LAPER'YE, I.R., nauchnyy red.; RAGINA,
G.M., ved. red.; BARANOVA, L.I., tekhn. red.

[Burning of gases in stoves and boiler furnaces and maintenance
of gas systems in plants] Szhiganie gazov v topkakh kotlov i
pechei i obsluzhivanie gazovogo khoziaistva predpriatii. Izd.r.,
neft. i gorno-toplivnoi lit-ry, 1961. 422 p. (MIRA 15:2)
(Gas distribution)

CHEPEL', Vladimir Mikhaylovich; VITKIN, Vladimir Mikhaylovich;
LIBERMAN, G.R., red.; ALMAZOV, V.Z., red.izd-va; KHENOKH,
E.M., tekhn. red.

[Aid to the stoker] V pomoshch' kochegaru. Izd.2., perer.
i dop. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1963. 220 p.
(MIRA 17:3)

CHEPEL', Vladimir Mikhaylovich [deceased]; LAPER'YE, I.R., red.;
DESHALYT, M.G., ved. red.

[Combustion of gases in boiler fireboxes and furnaces and
the maintenance of the gas equipment of enterprises]
Szhiganie gazov v topkakh kotlov i pechei i obsluzhivanie
gazovogo khoziaistva predpriatii. Izd.5., ispr. i dop.
Leningrad, Nedra, 1965. 447 p. (MIRA 18:7)

BOBEK, K.; CHAPELAK, V.

Clinical significance of the thrombocyte adhesive capacity
index. Klin.med. 37 no.6:93-103 Je '59. (MIRA 12:8)

1. Iz terapevticheskoy kliniki (zav. - prof.K.Bobek) meditsin-
skogo fakul'teta Karlova universiteta (Pl'zen', Chekhoslovakiya).

(THROMBOSIS, blood in

venous, adhesive capacity index of thrombocytes,
diag. value (Rus))

(BLOOD PLATELETS

adhesive capacity index in diag. of venous
thrombosis (Rus))

CHEPEL', Yakov Grigor'yevich; TOLSTOV, M.A., red.

[Let's discover, let's utilize the resources] Nakhodim,
ispol'zuem ~~reservy~~. Rostov-na-Donu, Rostovskoe knizhnoe
izd-vo, 1963. 28 p. (MIRA 17:10)

1. Direktor ordena Lenina sovkhoza "TSelinskiy" Yegorlykskogo
proizvodstvennogo upravleniya, Rostovskoy oblasti (for Chepel').

UTKIN, V.I., inzh.; ZEYLIDZON, Ye.D., inzh.; CHEPELE, Yu. M., inzh.;
RASHKOVICH, I.M., inzh.

Replies to B. A. Sarkisian's article "Use of two-polar starters
for controlling three-phase low-voltage electric motors." Elek.
sta. 31 no.12:84-85 D '60. (MIRA14:5)
(Electric motors—Starting devices)

CHEPELE, Yu.[Cepele, J.]; KANOVICH, N.[Kanovic, N.], red.;
PILKAUSKAS, K., tekhn. red.

[Liquid starting and regulating rheostat] Puskovoi i reguli-
ruiushchii zhidkostnyi reostat. Vil'nius, BMTIPI, 1961. 54 p.
(Electric motors—Starting devices) (MIRA 15:5)
(Electric rheostats)

CHEPELE, Yu.M., inzh.

Keeping electric motors in operation during brief power failures.
Energetik 9 no.2:35-36 F '61. (MIRA 16:7)

(Electric motors)

CHREPELE, Yu.M., inzh.

Cylindrical electric motor with external runner. Prom. energ.
19 no.6:12-13 Je'64 (MIRA 17:7)

MALOZOVSKIY, Moisey Ioselevich; CHEPELENKO, Konstantin Nikolayevich;
STUKALO, M.P., inzh., retsenzent; ONISHCHENKO, M.P., red.

[Mechanics and pattern maker; work practice] Slesar'-le-
kal'shchik; opyt raboty. Moskva, Gos.nauchno-tekhn.isd-vo
mashinostroit.lit-ry, 1960. 184 p. (MIRA 13:7)
(Laying out (Machine-shop practice)) (Gauges)

ACCESSION NR: AP4040464

S/0131/64/000/006/0253/0253

AUTHORS: Chepelenko, Yu. V.; Yem, A. P.; Borodulin, P. Ya.; Nomot, L. V.

TITLE: Strength of crucibles made of refractory material on boron nitride base

SOURCE: Ogneupory*, no. 6, 1964, 253

TOPIC TAGS: boron nitride refractory, refractory strength, refractory crucible, manganese slag, crucible

ABSTRACT: The strength of crucibles made of refractory materials on a boron nitride base was studied to determine their suitability for the process of selective reduction of manganese slags at 1800-2000C. Experimental meltings were conducted in a 60-kva oven with a graphite heating unit. A crucible with 40-50 g of slag was placed in the oven heated to the required temperature and was hermetically sealed to prevent its oxidation. After a period of time the crucible was emptied into a mold and the experiment was repeated with another portion of slag. Crucible wettability by slag was determined visually after cooling to 200-300C. It was noted that the thickness of the crucible walls

Cord 1/2

ACCESSION NR: AP4040464

decreased in the process of melting. This was explained by the oxidation of the material caused by the unavoidable air inflow. In spite of this the crucibles preserved their high strength. Every crucible withstood 10 - 12 meltings with each melting lasting for 30-40 minutes. Orig. art. has: 2 tables.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute); Zaporozhskoye otdeleniye instituta metallokeramiki i spetsial'nykh splavov AN USSR (Zaporozhye Branch of the Institute of Metalloca-ramics and of Special Alloys AN UkrSSR)

SUBMITTED: 00

DATE ACQ: 06Jul64

ENCL: 00

SUB CODE: MM

NO REF SOV: 001

OTHER: 000

Card 2/2

YEM, A.P.; CHEPELENKO, Yu.V.; BELIKOV, Yu.V.

Investigating the kinetics of the reduction process of briquets
and of an ordinary charge mixture in the preparation of ferrosilicon.
Nauch. trudy DMI no.51:121-130 '63. (MIRA 17:10)

KHITRIK, S.I.; YEM, A.P.; CHEPELENKO, Yu.V.; RABINOVICH, A.V.

Kinetics of the reduction of sinter and of an ordinary charge mixture in the production of ferroalicon. Izv. vys. ucheb. zav.; chern. met. 8 no.10:69-73 '65. (MIRA 18:9)

1. Dnepropetrovskiy metallurgicheskiy institut.

CHEPELEV, A.V.

Ways for reducing fuel consumption in diesel locomotive traction.
Trudy RIIZHT no.34:7-13 '61. (MIRA 17:1)

1. Starshiy inzhener toplivno-teplotekhnicheskogo otdela sluzhby
lokomotivnogo khozyaystva Sever-Kavkazskoy zheleznoy dorogi.

CHEPELEV, G. A.; MOCHALKIN, G. Ya.

"Fumigation of Wounds."

Dagestan Agricultural Institute

Veterinariya, 31, No. 7, Jul 1954 pp 45-50 FROM CLINICAL PRACTICE - Per material submitted
to the editorial office

CHMELEV, I., podpolkovnik tekhn. sluzhby; MASHKOV, Yu., inzh.-mayor.

Cleaning the caterpillar track. Tankist no.1:55-56 Ja '58.
(Tanks (Military science)--Maintenance and repair) (MIRA 11:3)

NIKITIN, Yu.I.; CHEPELEV, M.I.

Results of adopting a two-stage flowsheet for the comminution of
bauxite. TSvet. met. 36 no.5:78-80 My '63. (MIRA 16:10)

L 29110-65

ACCESSION NR: AP5002982

S/0113/65/000/001/0013/0016

AUTHORS: Moiseychik, A. N.; Nechayeva, Yu. G.; Chepalev, N. F.

TITLE: Load capacities of accumulator batteries for ZIL 130 automobiles under starting conditions at low temperatures

5
B

SOURCE: Avtomobil'naya promyshlennost', no. 1, 1965, 13-16

TOPIC TAGS: battery, automotive industry/ DSp 8 engine oil, ASZp10 engine oil, 6ST 78 EMSZ battery, ZIL 130 automobile

ABSTRACT: The load capacities of 6ST-78EMSZ accumulator batteries for ZIL-130 type automobiles were studied for the conditions of cold starting and for starting the motor after preheating to -15C before starting. The experiments were performed on special test benches in the laboratory, by using intermittent starter discharges of 10 seconds each. Before the experiment the battery was fully charged at some positive temperature. DSp-8 and ASZp-10 engine oils were used during the experiments. The following relation was used to get the volt-ampere characteristics:

$$I_{kz} = \frac{I_p U_n}{U_n - U_p} a,$$

Card 1/3

L 29110-65

ACCESSION NR: AP5002982

where I_{kz} is the short circuit current, I_p the current at the end of ten seconds after the discharge, U_p the corresponding voltage, and U_n the nominal voltage of the battery (12 volts in this case). The characteristics of the load capacity obtained from these tests are shown in Fig. 1 on the Enclosure. Here Curve 1 is the calculated short circuit current when the engine oil used was DSp-8; curve 2 is the same for ASZp-10; curve 3 is the same with preheating before starting (oil used was DSp-8); curve 4 is the calculated short circuit current with 75% of the discharge taking place in 10 seconds on the fourth trial; curve 5 is the same on the first trial. Orig. art. has: 4 formulas, 3 tables, and 4 figures.

ASSOCIATION: NAMI, Moskovskiy avtozavod imeni Likhacheva (NAMI, Moscow Automobile Factory)

SUBMITTED: 00

ENCL: 01

SUB CODE: PR, 40

NO REF SOV: 001

OTHER: 000

Card 2/3

L 29110-65

ACCESSION NR: AP5002982

ENCLOSURE: 01

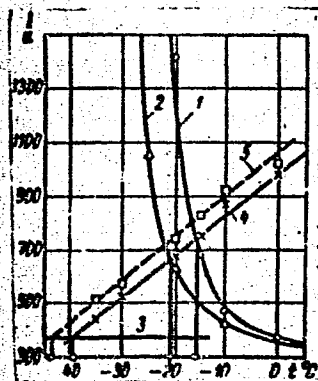


Fig. 1. Characteristics of the load capacity of 6ST-78 EMSZ accumulator batteries under starting conditions of the ZIL-130 automobile

Card 3/3

SOV/137-58-8-16869

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 92 (USSR)

AUTHOR: Chepelev, P.M.

TITLE: Grooving and Rolling of Railroad Rails at the im. Dzerzhinskiy Plant (Kalibrovka i prokatka zheleznodorozhnykh rel'sov na zavode im. Dzerzhinskogo)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp. pravl., 1957, Vol 2, pp 214-222

ABSTRACT: The advantages of diagonal passes for the rolling of railroad rails are as yet far from being employed to the full, as the spread of the metal in flat passes (P) is great (~14 mm in the 4th P, and ~28 mm in all flat P). As a result, in the flange P it is for all practical purposes only the flanges that are subject to tensile stresses, and the metal in the central portion of the base becomes friable (particularly if heating has been poor). To improve grooving for rails, a high temperature is required (start of rolling at $>1180^{\circ}\text{C}$), good heating throughout the billet and an increase in billet size to 260 mm. The rib angle of the first flange P should be $\sim 100^{\circ}$. This would assure intensive working of the central portion of the rail base. Intensification

Card 1/2

SOV/137-58-8-16869

Grooving and Rolling of Railroad Rails at the im. Dzerzhinskiy Plant

of reduction of the billet in the bloom due to reduction in the number of passes is of significance.

V.D.

1. Steel--Processing
2. Rolling mills--Performance
3. Tracks (Railroad)--Production

Card 2/2

CHEPELEV, P.M., inzh.; KARPUNIN, A.M., inzh.

Results of interplant training in manufacturing rails. Bivl. TSMICHM
no.21:14-20 '57. (MIRA 11:5)

(Railroads--Rails)

BEELYKH, K.D., inzh.(g. Dneprodzerzhinsk); VINOGRADOV, B.A., tekhnik;
(g. Dneprodzerzhinsk); CHEPELEV, P.M., inzh. (g. Dneprodzerzhinsk).

For a high quality of rails. Put' i put. khos. no.2:24-25 F '59.
(MIRA 12:3)

(Railroads--Rails)

ALEKSANDROV, P.A.; DOLZHENKOV, F.Ye.; VORONTSOV, N.M.; BAT', Yu. I;
TSUKANOV, G.E.; SAZONENKO, V.P.; CHEPELEV, P.M.; KRUGLYAK, P.F.

Working out the grooving of rolls and auxillary equipment for
the rolling of Z-shaped pile planks. Trudy Ukr. nauch.-issl.
inst. met. no.6:133-156 '60. (MIRA 14:3)
(Rolls(Iron mills))(Rolling(Metalwork))

BESEDIN, P.T.; ORESHKIN, G.G.; SOROKIN, A.A.; KARPUNIN, A.M.; CHEPELEV,
P.N.; VASIL'YEV, A.F.; KUTSENKO, A.D.

Mastering and introducing at the Dzerzhinsk Plant normalizing and
sorbitizing practices for rails along their entire length. Stal'
20 no.10:946-953 0 '60. (MIRA 13:9)

1. Zavod im. Dzerzhinskogo i Ukrainskiy nauchno-issledovatel'skiy
institut metallov.

(Railroads--Rails)

(Dneprodzerzhinsk--Annealing of metals)

CHEKMAREV, A.P., akademik; MELESHKO, V.I., kand.tekhn.nauk; PAVLOV, V.L.,
kand.tekhn.nauk; CHEKHRANOV, V.D., kand.tekhn.nauk; KARPUNIN,
A.M., inzh.; CHEPELEV, P.M., inzh.

New roughing conditions on 950 blooming mills. Trudy Inst.
chern. met. AN URSS 15:189-199 '61. (MIRA 15:2)

1. Akademiya nauk USSR (for Chekmarev).
(Rolling mills)

NIKOLAYEV, V.A.; IVANCHENKO, F.K.; TSUKANOV, E.F.; PAVLENKO, B.A.;
CHEPELEV, P.M.

Investigating applied stresses during rolling on rail and
structural steel mills. Stal' 23 no.10:924-925 0 '63.
(MIRA 16:11)

1. Dneprodzerzhinskiy metallurgicheskiy zavod-vtuz i zavod im.
Dzerzhinskogo.

BESEDIN, P.T.; SOROKIN, A.A.; FILONOV, I.G.; KARPUNIN, A.M.;
CHEPELEV, P.M.; SHCHERBINA, P.A.; AVDEYEV, M.G.; KUTSENKO,
A.D.; TSELYUKO, V.I.; CHERNEVICH, Ye.M.; ORGIYAN, V.S.;
CHERNETA, Z.A.

Improving the technology of the heat treatment of rails
at the Dzerzhinskii Plant for the purpose of increasing
their durability in tracks. Stal' 24 no.5:445-448 My '64.

(MIRA 17:12)

1. Dneprovskiy metallurgicheskiy zavod im. Dzerzhinskogo i
Ukrainskiy nauchno-issledovatel'skiy institut metallov.

ALEKSANDROV, P.A., doktor.tekhn.nauk; BESEDIN, P.T., kand.tekhn.nauk;
FILONOV, I.G.; SOROKIN, A.A.; KARPUNIN, A.M.; CHEPELEV, P.P.

Tempering rail heads along the total length. Put' i put.khoz. 4
no.8:15-16 Ag '60. (MIRA 13:7)

1. Ukrainskiy institut metallov (for Aleksandrov, Besedin).
2. Glavnyy inzhener Metallurgicheskogo zavoda im. Dzerzhinskogo
(for Filonov). 3. Nachal'nik tekhnicheskogo otdela Metallurgicheskogo
zavoda im. Dzerzhinskogo (for Sorokin). 4. Nachal'nik metal-
lurgicheskogo zavoda im. Dzerzhinskogo (for Karpunin). 5. Nachal'nik
rel'sobalochnogo tsekha Metallurgicheskogo zavoda im. Dzerzhinskogo
(for Chepelev).

(Railroads--Rails)

(Tempering)

YAFAYEV, R.Kh.; CHEPELEV, S.A.

Use of the reaction of indirect hemagglutination in the determining
the amount of botulin in sausage products. Zhur.mikrobiol., epid.
i immun. 32 no.11:21-25 N '61. (MIRA 14:11)

1. Iz kafedry epidemiologii s dezinfektsiyey Voenno-meditsinskoy
ordena Lenina akademii imeni S.M.Kirova.

(BLOOD—AGGLUTINATION) (BOTULISM)

(SAUSAGES—MICROBIOLOGY)

CHEPELEV, V. I.

CHEPELEV, V. I. --"Investigation of the Effect of the Structure and Physicomechanical Properties of the Hard Alloy T5K10 on its Cutting Properties." (Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min of Heavy Machine Building USSR. Central Sci Res Inst of Technology and Machine Building (TsNII TMash), Moscow, 1955

SO: Knizhnaya Letopis', No. 25, 18 Jun 55

* For Degree of Doctor of Technical Sciences

BILENKIN, Dmitriy Aleksandrovich; CHEPELEV, Viktor Ivanovich; STEPANYAN,
N.T.S., red.; MEDVEDEVA, R.A., tekhn.red.

[This is the kind of technology we need] Nam nuzhna takaya
tekhnika. Moskva, Izd-vo "Sovetskaya Rossiya," 1960. 55 p.
(MIRA 14:4)

(Automation)

ISAYEV, K.S., kand.tekhn.nauk; CHEPELEV, V.M., inzh.

Prospects for automating the tracklaying operations.
Transp. stroi. 16 no.1:23-25 Ja '66.

(MIRA 19:1)

for Vaydanych, V.I.

①

S/058/63/000/003/063/104
A059/A101

AUTHORS: Lyskovych, O. B., Vaydanych, V. I., Spitkovskyy, I. M., Belikovych, B. O., Kulyk, L. M., Chepelyev, V. V., Maksymovych, Kh. K.

TITLE: Growing large single crystals of NaI(Tl)

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 49, abstract 3E324
("Visnyk L'vivsk. un-tu. Ser. fiz.", no. 1(8), 117 - 119, Ukrainian)

TEXT: Temperature conditions were chosen for growing optically transparent NaI(Tl) single crystals, about 140 mm in diameter and about 100 mm long. Growing was performed by the method of Kyropoulos in a furnace with lateral and bottom heaters. Corundum slag crucibles the walls of which are not wetted by the melt are used. The rate of growth is 3 to 4 mm/hour.

[Abstracter's note: Complete translation]

Card 1/1

EWI(1)/BDS/REC(b)-2--AFFTC/ASD/ESD-3/SSD--IJP(C)
L 10038-63
ACCESSION NR: AR3000355

S/0058/63/000/004/D081/D081
60

SOURCE: RZh. Fizika, Abs. 4D559

AUTHOR: Lysskovych, O. B.; Vaydanich, V. I.; Chepelev, V. V.

TITLE: On the influence of geometric dimensions on the spectral and registration properties of NaI(Tl) phosphors

CITED SOURCE: Visnyk L'vivs'k. un-tu. Ser. fiz., no. 1(8), 1962, 120-123

TOPIC TAGS: luminescence of crystals, NaI(Tl), size effects

TRANSLATION: For NaI crystals activated with Tl, an investigation was made of the dependence of the ratio of the half width of the peak of the differential curve of the amplitude distribution of the photoelectrons from Gamma scintillations to the maximum of this curve, as a function of the crystal dimensions (diameter and height). It is confirmed that an increase in the height of the crystal causes the resolution to decrease. This decrease is particularly noticeable when the height of the crystal exceeds the diameter. Thus, for NaI

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(Tl) specimens with diameter $d = 70-90$ mm. and height $h = 70-120$ mm. the resolution of the best specimens at the Cs-135 Gamma line, reached 10-12%. At the same time, for crystals with $d = 20-40$ mm. and $h = 15-30$ mm. the resolution was much better. A deterioration is observed in the spectral properties of the specimens with increasing height, and this can be explained by assuming that the resolution a small Tl concentration depends not so much on the value of the latter, as on the change in the gradient of the concentration of Tl along the height of the crystal.

DATE ACQ: 14May63

ENCL: 00

SUB CODE: PH

cs/ja
Card 2/2

ZAKHARKO, Ya.M.; CHEPELEV, V.V. [Chepeliev, V.V.]

Asymmetry of the differential distribution curves of pulse amplitudes of X-ray detectors with NaI (Tl) crystals. Ukr. fiz. zhur. 9 no.9:1026 S '64.

(MIRA 17:11)

1. L'vovskiy gosudarstvennyy universitet im. I. Franko.

L 1583-66 EWT(m)/EWA(h)

ACCESSION NR: AP5015441

UR/0185/65/010/006/0653/0656³⁴

AUTHORS: Zakharko, Ya. M.; Chepelyev, V. V. (Chepelev, V. V.) ³³ _B

TITLE: The resolving power of an NaI(Tl) scintillator in the region of soft x-rays and gamma rays

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 6, 1965, 653-656

TOPIC TAGS: sodium compound, optic resolution, scintillation detector, gamma detector, x-ray detection ¹⁹

ABSTRACT: Rectangular crystals 16 x 6 x 1 mm and in the form of discs 20--30 mm in diameter and 1--1.2 mm thick were cut from single crystals of NaI(Tl). The dependence of the square of the resolving power on the reciprocal of the mean amplitude of the total absorption peak for CuK and MoK x rays was measured. The experimental results indicate that the inherent resolution of the scintillator in the investigated energy range (5--20 KeV) is zero. This is explained by the fact that the cross section for the Compton effect and the probability of production of secondary x rays, effects that are mainly

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ACCESSION NR: AP5015441

responsible for inherent resolution, are inappreciable in this energy range. The light yield per absorbed quantum is thus the only parameter that determines the resolving power at low energies. It is thus recommended that in order to improve the resolving power of detectors with NaI(Tl) crystals one must use crystals with maximum x-ray luminescence (high concentration of the activator impurity -- 1--2wt. per cent thallium iodide). Good results are obtained when using a natural cleavage face of the crystal covered by a thin layer of aluminum evaporated on it in a high vacuum. Good detectors produced in the authors' laboratory had an energy resolution of 43-45 per cent for CuK radiation. We express our sincere gratitude to O. B. Lyskovych for carrying out some optical measurements and for taking part in the discussion of the results of the paper. Orig. art. has: 2 formulas and 2 figures.

ASSOCIATION: L'vivs'kyi derzhuniverstet [L'vovskiy gosudarstvennyy universitet] (L'vov State University)

Card 2/3

L 1583-66

ACCESSION NR: AP5015441

SUBMITTED: 01Jul64

ENCL: 00

SUB CODE: SS, OF

NR REF SOV: 005

OTHER: 004

Card 3/3 *DP*

L 30050-65 EPA(s)-2/ENT(m)/T/ENP(t)/ENP(b) Pt-10 IJP(c) JD/JG

ACCESSION NR: AP5004527

S/0048/65/029/001/0078/0081

AUTHOR: Zakharko, Ya.M.; Chepalev, V.V.

TITLE: Some effects of interaction of x-radiation with ²⁷NaI(Tl) crystals and their bearing on the spectrometry of scintillation detectors¹³ Report, 12th Conference on Luminescence held in L'vov 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.29, no.1, 1965, 78-81

TOPIC TAGS: x-ray effect, scintillation detector, ²⁷sodium compound, radiation effect, luminescence

ABSTRACT: The purpose of the work was to study the decay of roentgenoluminescence and the effects of irradiation with x-rays on the scintillation behavior of plates cleaved from ²⁷NaI(Tl) single crystals. The thallium doped sodium iodide crystals were grown by the Kyropoulos technique, cleaved, enclosed in aluminum containers with a glass window, and irradiated with square 150-microsec x-ray pulses (rise and fall times under 1 microsec) at intervals of about 2000 microsec. The crystals were found to differ as regards their characteristics: those with good spectrometric (energy) resolution had no slow afterglow component; those with poor resolution ex-

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L 30050-65

ACCESSION NR: AP5004527

hibited a pronounced slow component (100 to 200 microsec) in the decay of their roentgenoluminescence. Initially good detector crystals after being subjected to rough mechanical treatment of their surface begin to exhibit a slow component. Hence it is inferred that the slow component is associated with the presence of structural imperfections; this inference is substantiated by the results of temperature studies (heating heals the defects). No correlation between the thallium content and the decay time of the slow component was found. The growing atmosphere does not appear to be significant, but such factors as the rate of growth and subsequent rate of cooling seriously affect the spectrometric qualities of NaI(Tl) crystals. As might be expected (and as is known from studies by other authors) prolonged irradiation gives rise to structural imperfections (mainly anionic vacancies) with resultant deterioration of the detector characteristics. The recovery time depends on the dose or exposure time at a fixed level. In general, by virtue of self-diffusion recovery is fairly rapid: some 2-3 hours after irradiation for under 1 min at 300-350 r/min. Hence the usual recommendation of natural aging and/or low-temperature anneal for enhancing the resolution of NaI(Tl) detector crystals. Orig. art. has: 2 figures.

{02}

Card 2/3

L 30050-65

ACCESSION NR: AP5004527

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im.Iv.Franko (L'vov State University)

SUBMITTED: 00

ENCL: 00

SUB CODE: SS,NP

NR REF SOV: 004

OTHER: 003

ATD PRESS: 3194

Card 3/3

L 17880-66 EWT(1)/EWT(m)/EWP(t) IJP(c) JD

ACC NR: AP5027684

SOURCE CODE: UR/0051/65/019/005/0831/0833

AUTHOR: Zakharko, Ya. M.; Chepelev, V. V.

ORG: none

TITLE: Mechanism of excitation of scintillations in single crystals of sodium iodide, activated by thallium 77

SOURCE: Optika i spektroskopiya, v. 19, no. 5, 1965, 831-833

TOPIC TAGS: single crystal, sodium compound, thallium, exciton, luminescence, oscillograph, heat effect, x ray irradiation, temperature dependence, activation energy

ABSTRACT: The temperature effect on the kinetics of the rise and attenuation of roentgenoluminescence during pulse excitation was studied with NaI crystals in order to separate the exciton from the recombination mechanism of excitation. The X-ray radiation pulses were generated by a Mo anticathode in the tubes of a URS-60 apparatus (duration of pulses, 150 μ sec; rate of rise and attenuation 1 μ sec). The relaxation effects were studied with a SI-8 oscillograph. The data on processing of oscillograms, taken at various temperatures, were used for plotting

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UDC: 621.387.464.+548.0

L 17880-66

ACC NR: AP5027684

a diagram on the dependence of the damping time (τ) on the temperature (T) in the $\log \tau$ vs $1/T$ coordinates. The energy level producing the oscillation was determined from the slope of the curve as 0.34 eV. This agreed well with the average value of the thermoluminescence peak at 159K (0.35 ± 0.06 eV) calculated by other methods. The energy of thermal activation, which resulted in the appearance of the thermoluminescence at 250K, was determined as 0.57 ± 0.04 eV. In the NaI(Tl) crystals, the p-n recombination yielded $\geq 50\%$ of the luminescence at 240-300K. At lower temperatures, the exciton mechanism of excitation of the luminescence nuclei predominated. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 23Apr65/ ORIG REF: 004/ OTH REF: 002

Card 2/2 TS

BOGOMOLOVA, L.D. [translator]; ~~CHEPELEVA, I.V.~~ [translator]; PENIN, N.A.,
red.; MAYKOVA, Ye.I., red.; BELEVA, M.A., tekhn.red.

[Electron spin resonance in semiconductors] Elektronnyi spinovyi
rezonans v poluprovodnikakh; sbornik statei. Moskva, Izd-vo
inostr.lit-ry, 1962. 380 p. Translated from the English.
(Semiconductors) (MIRA 15:5)
(Paramagnetic resonance and relaxation)

L 18248-65 EWT(1)/EWT(m)/EWP(e)/EEG(t)/EWP(b) Pq-L/PeB IJP(c)/RAEM(a)/
AS(mp)-2/AFWL/RAEM(c)/ASD(a)-5/SSD/RAEM(1)/ESD(gs)/ESD(t) WH

ACCESSION NR: AP5000659

S/0181/64/006/012/3617/3619

AUTHORS: Bogomolova, L. D.; Lazukin, V. N.; Chepeleva, I. V. B 15

TITLE: Electron paramagnetic resonance of Mn²⁺ in Chalcogen glasses 21

SOURCE: Fizika tverdogo tela, v. 6, no. 12, 1964, 3617-3619

TOPIC TAGS: chalcogen, glass, electron paramagnetic resonance,
line width, antiferromagnetism, absorption line, transition metal,
temperature dependence

ABSTRACT: In view of the lack of published data on the EPR in chalcogen glasses, the authors investigated by the EPR method several systems containing transition metals, and systems in which the transition metals were specially introduced. The only systems for which EPR could be observed so far were those with Mn²⁺, Fe³⁺, and Gd ions, and the present paper is devoted to some results on the EPR of Mn²⁺ in glass-like compounds and crystallized glasses of the

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L 18248-65

ACCESSION NR: AP5000659

As₂Se₃-As₂Te₃ system, in which the Mn was specially introduced, and also the system MnSe-As₂Se₃-As₂Te₃. The investigated glasses were synthesized in evacuated quartz ampoules at 850K, at which temperature they were kept in the molten state for two hours, after which they were cooled with the furnace turned off. The EPR absorption measurements were made with a video-radiospectroscope in the 3.2 cm band at temperatures from 77 to 293K. The EPR absorption lines in all the investigated substances broadened with decreasing temperature, and in the crystallized glasses they disappeared at a certain temperature that depended on the composition of the sample. This behavior indicates that these substances go over into an antiferromagnetic state. The line broadening and the decrease in the line intensity with decreasing temperature in such compounds indicates that they contain crystalline intrusions of antiferromagnetic complexes MnSe and MnTe. Orig. art. has: 4 figures.

Cord 2/3

L 18218-65

ACCESSION NR: AP5000659

ASSOCIATION: None

SUBMITTED: 14Apr64

ENCL: 00

SUB CODE: SS

NR REF SOV: 003

OTHER: 003

Card 3/3

I. 8463-65 EWT(1)/EWT(m)/EEG(t)/EWP(q)/EWP(b) IJP(c)/SSD/ASD(a)-5/AS(mp)-2/
AFWL/AFETR/RAEM(i)/RAEM(c)/ESD(gs)/ESD(t)/RAEM(t) JD/GG
ACCESSION NR: AP4048377 S/0053/64/083/003/0433/0502

AUTHOR: Bogomolova, L. D.; Lazukin, V. N.; Chepeleva, I. V.

TITLE: Electron paramagnetic resonance in silicon and germanium B

SOURCE: Uspekhi fizicheskikh nauk, v. 83, no. 3, 1964, 433-502

TOPIC TAGS: electron paramagnetic resonance, paramagnetic resonance, silicon, germanium, semiconductor

Abstract: In this survey there is a discussion of works on the electron paramagnetic resonance of impurities which form shallow and deep levels in silicon and germanium and also the electron paramagnetic resonance of radiation flaws which arise as a result of the irradiation of crystals. A survey is given of works published before 1963. There is no discussion of the technology and potentialities of electron paramagnetic resonance of minority donors in silicon and of the Kohn and Luttinger theory. Some of the special problems are taken up which are connected with methods of studying the electron paramagnetic resonance of semiconductors.

ASSOCIATION: none

Card 1/2

L 8463-65

ACCESSION NR: AP4048377

SUBMITTED: CO

ENCL: CO

SUB CODE: NP, IC

NO REF SOV: 001

OTHER: 099

JPRS

Card 2/2

L 33017-66

ACC NR: AP6015082

SOURCE CODE: UR/0020/66/168/001/0059/0062

AUTHOR: Bogomolova, L. D.; Lazukin, V. N.; Chepeleva, I. V.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Electron paramagnetic resonance of positive bivalent manganese ions in $\text{Ti}_2\text{SeAs}_2\text{Se}_3$

SOURCE: AN SSSR. Doklady, v. 168, no. 1, 1966, 59-62

TOPIC TAGS: paramagnetic ion, manganese, selenide, thallium compound, electron paramagnetic resonance, arsenic compound, microwave spectroscopy, antiferromagnetism

ABSTRACT: The authors study electron paramagnetic resonance in vitreous $\text{Ti}_2\text{SeAs}_2\text{Se}_3$ with manganese impurities in quantities of 0.1-1 wt.%. A standard RE-1301 microwave spectrometer was used for taking the EPR spectra at temperatures of 300 and 77°K. A superheterodyne spectroscope was used for measurements in the 3 cm range at 4.2°K. All specimens except one (with 0.7 wt.% Mn) showed two resonance lines with g -factors of $g \approx 4$ and $g \approx 2$. The single exception showed no EPR line with $g \approx 4$, having only a single line with $g \approx 2$. Some asymmetry is observed in the line with $g \approx 4$ even when the edges of the two lines overlap. When the temperature was reduced to 77°K, an increase in line intensity was observed by a factor of 4-6 for the line with $g \approx 4$, and by a factor of

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UDC: 541.67-161.6-538.113

L 33017-66

ACC NR: AP6015082

2

1.5-2.3 for the line with $g \approx 2$. A model is proposed for the paramagnetic center responsible for the EPR line with a g -factor of ≈ 4 , due to manganese ions in the specimens. The bivalent manganese ion is positively charged and located in a strong electric field of 4 charges: two Se^{2-} ions and two Tl^+ ions. Although the line with $g \approx 2$ did not disappear at 77°K, the increase in line width with reduction in temperature at high Mn concentrations may indicate the formation of antiferromagnetic complexes with a Neel point below 77°K. Otherwise the line with $g \approx 2$ may be assumed to be the superposition of two lines: one due to Mn in the antiferromagnetic complexes, which is broadened and decreases in intensity when the temperature is lowered to 77°K, and a second line due to other paramagnetic centers with an intensity which may increase during cooling. A comparison of the EPR spectra for all specimens showed that the number of centers contributing to the line with $g \approx 2$ increases more rapidly with manganese concentration than the number of centers responsible for the line with $g \approx 4$. The authors thank D. T. Kolomiys and V. P. Shilo for furnishing the specimens used in the experiment and for helpful consultation. Orig. art. has: 2 figures, 1 table.

SUB CODE: 20/ SUBM DATE: 14Jul65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

ACC NR: AP6033268

SOURCE CODE: UR/0020/66/170/004/0819/0821

AUTHOR: Chepeleva, I. V.; Iasukin, V. N.; Dembovskiy, S. A.

ORG: Moscow State University im. N. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Electron paramagnetic resonance of Gd^{3+} ions in chalcogenide glass $Tl_2SeAs_2Se_3$

SOURCE: AN SSSR. Doklady, v. 170, no. 4, 1966, 819-821

TOPIC TAGS: electron paramagnetic resonance, gadolinium, glass property, epr spectrum, temperature dependence

ABSTRACT: The gadolinium admixture to the glass was 0.2 - 0.5 wt.%. The synthesis of the glass was described elsewhere (ZhTF v. 28, 5, 981, 1958). The temperature was raised at 150 deg/hr with soaking for an hour at 600 and 900C. The cooling was either in the disconnected oven, or by quenching in cold water. The epr spectra were recorded with a standard spectrometer (RE-1301) at room and nitrogen temperatures. When the Gd content was 0.5% and the temperature was 4.2K, the epr was observed with a superheterodyna 3-cm spectrometer. The observed spectra were quite complicated and comprised superpositions of lines of different widths and intensities. The intensity of the spectrum increased approximately four times on going from room temperature to nitrogen temperature. The intensities of the spectrum also increased with increasing gadolinium concentration. The method of cooling had no effect. Neither did the method of synthesis. Most of the properties of the observed spectral lines are thus

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UDC: 541.67 + 161.6: 538.113

ACC NR: AF6033268

connected with the presence of a strong crystalline field. The authors thank D. I. Volkov for a discussion of certain problems, V. P. Shilo for synthesizing some samples, and N. Ye. Kask for epr observations at 4.2K and I. I. Koshina for the x-ray phase analysis. This report was presented by Academician L. A. Artsimovich 8 January 1966. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 30Dec65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

CHEPELEV, Viktor Gavrilovich; VEROMAN, V.Yu., red.

[High-frequency spark machining pulse generators and semiconductor devices used in electric spark machining] Vysokochastotnye elektroerozionnye generatory impul'sov i poluprovodnikovye ustroistva, primeniamye v praktike elektroerozionnoi obrabotki. Leningrad, 1964. 33 p.
(MIRA 18:4)

L 45741-65 EWT(m)/EWA(h) GS
ACCESSION NR: AT5009626

UR/0000/64/000/000/0060/0064

AUTHOR: Zakharko, Ya. M.; Chepelyev, V. V. (Chepelev, V. V.)

TITLE: Procedure for preparation of scintillation detectors for soft x-rays, using NaI(Tl) crystals, and some detector parameters

SOURCE: L'vov. Universytet. Pytannya fizyky tverdogo tila (Problems in solid state physics). L'vov, Vyd-vo L'viv. univ., 1964, 60-64

TOPIC TAGS: scintillation counter, sodium iodide scintillator, scintillator reflector, scintillator efficiency

ABSTRACT: The authors consider some possibilities of increasing the energy resolution of a scintillation spectrometer, and present the characteristics of the single-crystal NaI(Tl) x-ray detectors grown by the Kiropoulos method in the Laboratory of Crystal Phosphors of the L'vov University, for the 0.3--2.5 Å range. Plates 20 x 6 x 1.5--2 mm were cut from a 70 x 70 mm single crystal and placed in duraluminum hermetic containers made with a glass output window and a beryllium input window. The energy resolution in the soft x-ray region was measured with a scintillation spectrometer based on the URS-50I apparatus. The experimental set-up and its calibration are described. Tests with magnesium oxide and aluminum foil reflectors

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I 45741-65

ACCESSION NR: AT5009626

have been made and have shown that the most suitable reflector for the scintillation light is aluminum foil, the use of which guarantees maximum x-ray detector efficiency. The resolution of the equipment is found to be highly sensitive to the type of photomultiplier and to the optimal conditions of its operation. Orig. art. has: 5 figures and 5 formulas.

ASSOCIATION: None

SUBMITTED: 22Jun64

ENCL: 00

SUB CODE: NP, OP

NR REF SOV: 002

OTHER: 003

P-58
Corr: 2/2

ZAKHARKO, Ya.M.; CHEPELEV, V.V.

Some effects of the interaction between X rays and NaI (Tl) crystals and their relation to scintillation spectrometry.

Izv. AN SSSR Ser. fiz. 29 no.1:78-81 Ja '65.

(MIRA 18:2)

1. L'vovskiy gosudarstvennyy universitet im. Iv. Franko.

BOGOMOLOVA, L.D.; LAZUKIN, V.N.; CHEPELEVA, I.V.

Electron paramagnetic resonance of Mn^{2+} in chalcogenide glasses.
Fiz. tver. tela 6 no.12:3617-3619 D '64 (MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

CHEPELEVA, M.

Control? Yes, plus comrade's help! Sov. profsoiuzy 17 no.13:
4-5 J1 '61. (MIRA 14:7)

1. Master smeny Moskovskoy obuvnoy fabriki imeni Kapranova.
(Moscow--Shoe industry--Quality control)

CHEPELEVA, M.A.

22091 Chepeleva, M. A. "C Klinike Mnozhestvennoy nielomy (plazmotsitomy) Vracheb, delo, 1949, No. 7, stb 601-08.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

CHEPELEVA, M.A.
MAYTAK, V.I.; CHIRPNEVA, M.A.

Morphological blood picture in thyreotoxicosis. Medych.zhur. 21
no.6:92-98 '51. (MIRA 11:1)

1. 2 viddilu klinichnoi khirurgii (zav. - dotsent O.L.Pkhakadze)
i viddilu klinichnoi gematologii (zav. - prof. D.N.Yanove'kiy)
Ukrains'kogo institutu klinichnoi meditsini (direktor - akad.
M.D.Strazhesko)
(BLOOD) (THYROID GLAND--DISEASES)

Чепелева, М. А.

USSR

Чепелева, М. А.: Злокачественное малокровие (Per-
nicious Anemia). Kiev: Gosmedizdat. 1952. 103 pp.
Reviewed in *Klin. Med.* (U.S.S.R.) 32, No. 2, 90-2(1954).

CHEPELEVA, M. A.

5940. Significance of the lymphadenogram. M. A. Chepeleva
Vrach. Delo, 1954 No 5, 75n. *Abstracts Zh. BSN*, 1956, Abstract
 No. 78328.—The cellular composition of the lymph glands can
 change, both on account of specific processes and on account of general
 infective toxic processes. More frequently the change is a non-sp-
 reactive hyperplasia, which can arise from the lymphatic tissue
 directly or from the reticuloendothelial tissues and vessels of the
 gland. In contrast to this type of pathological picture the changes
 seen in a number of processes are characterized by a varied cytological com-
 position, in which there is no definite quantitative relationship between the
 number of cellular elements. For diagnostic purposes no great value can be attached to the
 adenogram. (Russian)

D. H. SMYTH

CHEPELEVA, M.A., starshiy nauchnyy sotrudnik

Reticuloendothelial system in various forms of endocarditis
as shown by blood and bone marrow sampling. Mat.po obm.nauch.
infrow. no.2:223-228 '58. (MIRA 13:6)

1. Iz otdela klinicheskoy gematologii (sav. - prof. D.N. Yanovskiy)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy
meditsiny, Kiev.

(RETICULO-ENDOTHELIAL SYSTEM)
(MARROW)

(BLOOD)
(ENDOCARDITIS)

CHIRPILIEVA, M.A., starshiy nauchnyy sotrudnik

Investigation of the lymph nodes in the clinic. Mat.po.obm.
nauch.inform. no.2:229-235 '58. (MIRA 13:6)

1. Iz otdela klinicheskoy gematologii (sav. - prof. D.N.
Yanovskiy) Ukrainskogo nauchno-issledovatel'skogo instituta
klinicheskoy meditsiny, Kiev.
(LYMPHATICS)

CHENPREVA, M.A. (Kiyev)

Importance of puncture biopsy in diagnosing cervical tumors and tumoroid formation. Vrach.delo no.11:1143-1145 N'58 (MIRA 12:1)

1. Otdel klinicheskoy gematologii (zav. - prof. D.N. Yanovskiy)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy
meditsiny imeni akad. N.D. Strazhesko.)

(NECK—TUMORS)

(BIOPSY)

CHEPELEVA, M.A.; VINOGRADSKAYA-YEZERSKAYA, M.A. (Kiyev)

Therapeutic effect of preparation No.8 (embitol) in some systemic diseases of the hemopoietic organs. Vrach.delo no.8:815-819 Ag '59.
(MIRA 12:12)

1. Otdel klinicheskoy gematologii (zav. - prof. D.N. Yanovskiy)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni akademika N.D. Strazhesko.
(ETHYLAMINE) (HEMOPOIETIC SYSTEM--DISEASES)

CHEPELEVA, M.A. (Kiyev)

Classification of reticulosis. Vrach. delo no.9:47-51 S '60.

(MIRA 13:9)

1. Otdel klinicheskoy gematologii (sav. - prof. D.N. Yanovskiy)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny
im. akad. N.D. Strashenko.

(RETICULO-ENDOTHELIAL SYSTEM DISEASES)

CHEPELEVA, M. A., Doc MED SCI, ^{*Data*} ~~MATERIAL~~ ^{*the*} ON CLINICO-
MORPHOLOGICAL STUDY OF THE PATHOLOGY OF LYMPH NODES."
KIEV, 1961. (KIEV ORDER OF LABOR RED BANNER MED INST
IM ACAD A. A. BOGOMOLETS). (KL, 3-61, 229).

CHEPELEVA, Mariya Abramovna; MIKHNEV, A.L., red.; LEVCHUK, A.O.,
tekh. red.

[Pathology of the lymph nodes; a clinical morphological study]
Patologiya limfaticeskikh uzlov; kliniko-morfologicheskoe is-
sledovanie. Kiev, Gosmedizdat USSR, 1962. 318 p.

(MIRA 15:11)

(LYMPHATICS—DISEASES)

VARTAZARYAN, B.A., assistant; CHEPELEVA, T.L., assistant

Influence of acute inflammation of the gall bladder on the process of bile formation. Sbor. trud. Kursk. gos. med. inst. no.13:126-128 '58.
(MIRA 14:3)

1. Iz kafedry farmakologii (sav. - dotsent A.A.Tyurina) Kurskogo gosudarstvennogo meditsinskogo instituta.
(GALL BLADDER-DISEASES) (LIVER)

CHEPELEVITSKIY M.A.

5(6)
 ADDRESS:
 92148,
 PREVIOUS:
 ADDRESS:

Vasil'yev, V. P., Korobleva, V. D., 1957/151-50-1-30/50
 Zaslavskiy, E. B.

Conference Discussion on the Methods of Investigating the
 Complex Formation in Solutions (Sovetskuyu-dimenzia
 po metodam itsochnykh kompleksobrazovaniya v rastvorakh)

Investitsiya vreshnaya sobremennosti, Khimika 1
 Khimicheskaya tekhnologiya, 1956, Nr 5, pp 175 - 176 (USSR)

From February 16 to 21, 1956 a conference discussion took
 place at the Vsesoyuznyy nauchnyy tsentr in a section of the
 Tikh Al-Baiev Conference on the Chemistry of Complex
 Formation. More than 200 persons attended the conference,
 among them 103 delegates from various parts of the USSR.
 At the conference methods of determining the constants of
 the complexes in solutions were discussed, as well as the
 methods of calculating the instability constants according
 to experimental data and problems concerning the influence
 of the solvent upon the processes of complex formation.
 o o o o o. In the lecture by A. E. Babko and
 E. E. Fomcheva, "Physical and Chemical Analysis of the
 Systems With 5 Colored Complexes in the Solution", the results
 of a systematic investigation in copper-quinoline-sulfate,
 the results in copper-pyridine-sulfate systems by means of
 the titration method were dealt with. In the lecture by Iu. A.
 Fikhtel'berg the idea of a method of determining the complex
 formation processes in solutions was developed. Besides the
 determination of the composition and stability of the complexes
 also the physical and chemical properties, the chemical nature
 and the structure of the complex compounds must be investi-

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gated.
 I. I. Alekseyev and E. B. Yatsimirskiy in their lecture "Investiga-
 tion of the Polymerization of α -Poly Acids in Solutions"
 continued experimental results of the investigation of the
 polymerization in solutions of α -polyacetic acid. The authors
 proved that especially the α -polyacetic acid within a certain
 range of the pH values and the concentrations exists as a
 number of compounds that can be expressed by an overall formula
 $\text{MeO}(\text{MeO})_n\text{H}$. In the lecture by E. V. Akseel' and V. B.

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Yatsimirskiy investigation results on basis salts taking into
 account the complex formation in solutions by means of the
 potentiometric method were mentioned for systems with zinc,
 cadmium and indium. In the evaluation of their results the
 authors employed the method of the table difference. The
 calculation of the consecutive constants was carried out
 according to the interpolation formula by Nestor. Much
 interesting was a lecture on "pH Measurement Method of the
 Solubility Diagram of the System $\text{Cu}^{2+}\text{-HCl} - \text{H}_2\text{O}$ in Investi-
 gating Complex Copper Compounds in Saturated Solutions". It
 was found that the substance at the bottom of the liquid is
 more basic than the solution; furthermore, the increased
 acidity of the solution from the viewpoint of the formation
 of hydroxide complexes in the solution was explained.
 V. I. Kuznetsov opened the discussion with his lecture; he
 pointed out the necessity of utilizing the concepts worked
 out in the investigation of the polymerization in organic
 chemistry in the chemistry of polymer complexes. A. A.
 Grinberg thinks that the new approach of the hydrolysis

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007/153-58-3-30/30

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Conference Discussion on the Methods of
Investigating the Complex Formation in Solutions

207/151-38-1-30/30

of some Thorium Complex Compound" results obtained from the experimental investigation of the distribution of thorium compounds in the systems: acetylacetone - benzene - water, and 2-xy-1,4-naphthoquinone - chloroform - water were given. From these data the instability constants of the thorium complexes with acetyl-acetone and 2-xy-1,4-naphthoquinone were calculated. I. V. Tsanayev, G. S. Savchenko and Ye. V. Goshchakov held a lecture on the application of the solubility method in the determination of the stability of complex compounds in solutions. In this lecture other methods of investigating complex formation processes in the solution were discussed (pH measurement, measurement of the solution conductivity, as well as of the heat of mixing). B. B. Rabinovich, in his lecture "Application of the Solubility Method in Study of the Phthalocyanine Complexes of Metals", used the determined quantitative characteristics of the reaction of the metal ions with the phthalocyanine of the nickel, copper and cadmium, as well as of the free phthalocyanine into the solution, as an experimental proof of the existence of sp^2 -bonds in the complexes investigated. These characteristics also served him as proof of new electronic formulas of phthalocyanine and its derivatives. In the lecture delivered by I. L. Kravtchenko, "The Method of the Two Solvents as a Method of Investigation of the Formation and Properties of Organic Complexes" it was proved that this method makes it possible to determine the number of complex molecules formed in the system, their composition and relative stability. V. I. Kuznetsov, A. E. Babko, E. P. Komar, I. A. Medvedev and I. I. Tur'yeva took part in this discussion. In the lecture delivered by A. A. Grilberg and S. P. Kisileva on the complex formation of cobalt with a coordination number above four it was proved that in the case of a large chloroform and bromine ion excess complexes with the coordination number 5 are formed. The stability constants of these complexes were estimated. E. A. Abramovich mentioned a new manipulation in the spectrophotometry of the complex compounds that can be used to investigate the formation (or predomination) of one kind of complex. This method makes it possible to determine the composition and instability constant of the complex. In the lecture delivered by E. B. Yatsel'mirsky and V. B. Korshakova the application of the theory of crystal line fields for the determination of the composition and structure of the chlorides of cobalt, nickel and copper according to the absorption spectra of these complexes was discussed. It was proved that in the case of these complexes an equilibrium between the tetrahedral and octahedral forms of the cobalt chloro complexes. Yu. P. Sasarenko proved in his lecture "The Application of Radioactive Isotopes in the Investigation of the Solvation Equilibrium in Solutions of Complex Compounds" the possibility of using data on the isotope exchange to clarify the structure of the complex and mechanism of its formation processes. V. Kiselev mentioned in his lecture the use of radioactive isotopes in the study of the stability of complexes in non-aqueous solutions. A. V. Ablov, V. E. Tolanchuk, V. I. Kiselev and A. E. Golub took part in the discussion of the lecture. The usefulness of employing the theory of the crystalline fields in explaining the results obtained from the absorption spectra of the com-

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Conference Discussion on the Methods of
Investigating the Complex Formation in Solutions

SEP/15-30-3-30/30

plex compounds was stressed. In the lecture delivered by I. A. Shuk on "The Investigation of the Complex Formation by the Method of the Dielectric Permeability and Permittivity" the principles of the methods mentioned were presented. This method was employed for investigating the compounds of the type of the "affiliation" products. The lecture delivered by I. A. Shuk and Ye. Ye. Kriss "Employing the Method of the Dielectric Constant for Investigating Complex Compounds of the Type of Crystal Solvates in Solutions" dealt with the investigation of the solvates of lanthanum and cerium chlorides with ketones as well as with the study of the compounds formed in heterogeneous systems with tributyl phosphate and nitric acid. Ye. P. Zolotarev gave in her lecture "The Polarographic Method of Investigating the Complex Formation in Solutions" a survey of the applications of the polarographic method in the study of the complex formation. In the lecture delivered by Ye. P. Zolotarev "The Cryoscopic Method of Investigating the Complex Formation Reactions" a survey of the possibilities of the cryoscopic method was given, and its applicability in the study of several complex compounds of various elements with organic substances was proved. A. M. Zolotarev described the results of his investigations of the complex compounds of several metals. A vivid discussion took place on the lecture held. Ye. A. Fialkov and Ye. Ye. Fialkov considered the cryoscopic method of investigating complex compounds as of considerable value. E. E. Fialkov pointed out that the publication of the survey on individual methods of investigating the complex formation reactions could be desired; this survey should be brought to a level that makes the calculation of the equilibrium constants of the processes to be investigated the problem of the method of evaluating the experimental results becomes more and more important. Many scientists use the equilibrium constants without taking into account the way employed by A. M. Zolotarev. The calculation methods of these constants are one step back, as compared to those employed at present. In his lecture E. P. Zolotarev pointed out the extremely great importance of the mathematical

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evaluation of the results obtained, as well as of the plotting of curves. A. E. Zolotarev suggested selecting one or two systems that were experimentally well investigated, and to evaluate the results obtained according to different methods so that it is possible to check and evaluate them. Ye. I. Tar'yan took part in the discussion. Ye. A. Fialkov discussed in his lecture "The Effect of the Solvent on the Complex Formation Process as Well as on the Rate of Equilibrium in the Solutions of Complex Compounds" the influence exerted by the solvents upon the molecular state, upon the solvation of the solvents components, upon the stabilization of the systems in the system, upon the step-wise dissociation of the complex formed and upon a number of other processes. The influence exerted by the dielectric constant upon the complex formation process was discussed. It was concluded that a direct relation does not exist, and that the chemical nature of the solvents must be taken into account. A. V. Ablev and L. V. Eshkova gave a lecture on "The Spectroscopic Investigation of Nickel Cobalt 'Pyridinate' in Various Solvents". The instability constants of the complexes were determined and it was proved that the

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Conference Discussion on the Methods of
Investigating the Complex Formation in Solutions

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stability of the 'prization' is changed in dependence on the solvent. Ya. I. Tur'yan in his lecture "The Influence of the Solvent on the Composition and Stability of Complexes" discussed the polarographic investigation method of the chloride and thiocyanate complexes of lead in aqueous ethanol solutions at different content of the non-aqueous solvent and at a constant ionic strength. A step-wise character of the complex formation was found as well as the stability constants of the complexes. The influence of the dielectric constant of the solution on the stability of the investigated complexes was proved. In the lecture by V. P. Vasilenko "The Main Methods of Investigation of the Aqueous Ethanol Solutions of the Complexes of Lead" the results of the investigation of the qualitative recording of the complex formation in the complex formation. The applicability of the polarographic method in the determination of the composition and stability of the aqueous complexes in mixed solvents was proved and experimental material on the thermodynamics of the dissociation of the cadmium-aquo complexes in aqueous ethanol solutions was mentioned. V. E. Tolmachev, V. I. Kuznetsov

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and I. V. Ponomarev stressed in their lectures the necessity of a more complete and general investigation of the solvation processes. A. E. Babko and A. M. Golub pointed out the great importance of the investigations of the complex formation equilibria in non-aqueous solutions, and made several scientific comments on the lecture by Ya. I. Tur'yan. The following comments took part in this discussion: L. P. Adamovich, O. I. Zhuravskiy, A. P. Moskvina and A. G. Shcherbakov. At the final closing of the conference A. G. Shcherbakov, Corresponding Member of the USSR Academy of Sciences, made a speech. At his speech that such a conference was very urgent. A detailed discussion of the determination methods of the composition of the complexes, as well as of the method used in the study of the quantitative characteristics of the stepwise complex formation was extremely useful for all who attended this conference.

Card 16/16
207/153-56-3-30/30

1. CHEPELEVETSKIY, M. D.
2. USSR (600)
4. Periodic Law
7. Arrangement of a periodic system of atomic nuclei. Zhur. tekhn. i eksp. fiz.
23 no. 3. '52.

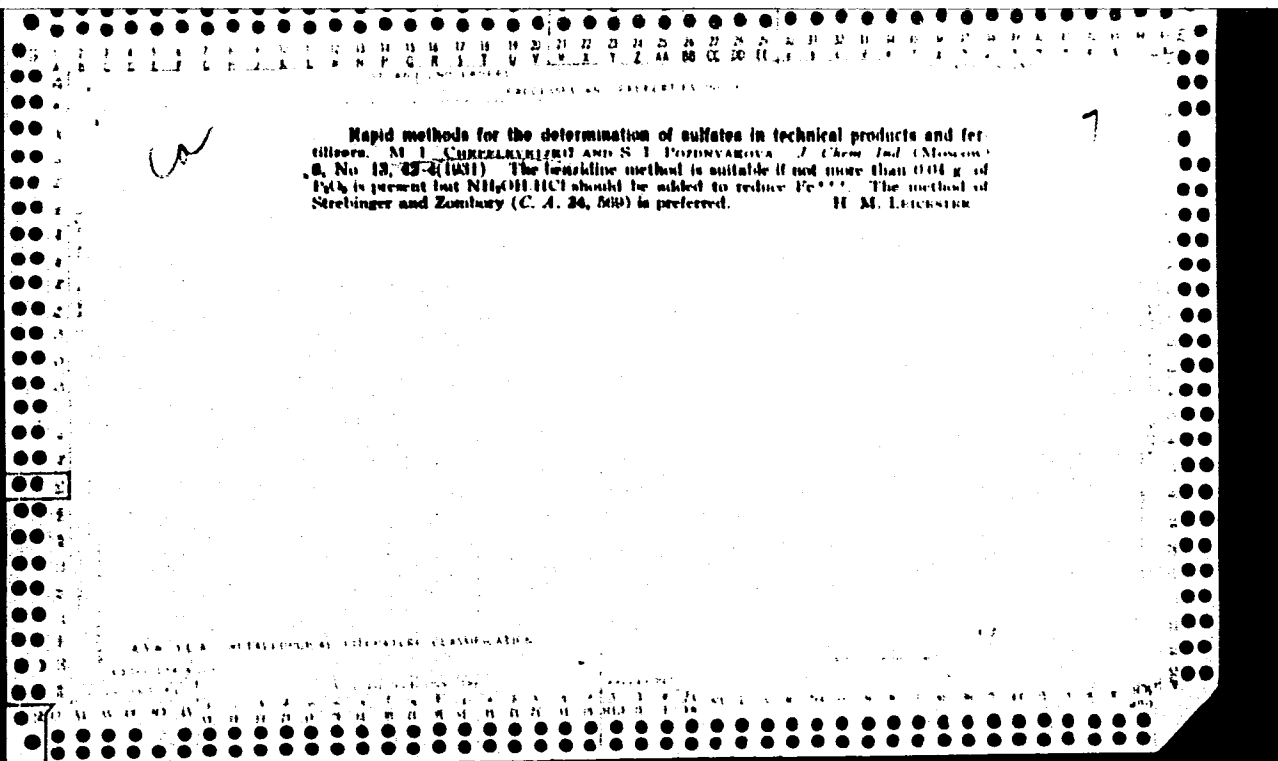
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

LIST AND THE ORDER																									
PROCESSES AND PROPERTIES INDEX																									
<i>ca</i> Determination of phosphoric anhydride in phosphates and fertilizers by reducing the molybdenum precipitate with amalgam. M. L. CHEPELEVETSKII AND R. A. FINKINA. <i>J. Applied Chem. (U. S. S. R.)</i> 4, 858-64 (1931). $(\text{NH}_4)_2\text{P}_2\text{O}_7 \cdot 12\text{MoO}_3$ obtained in the usual manner is dissolved in NaOH, the resulting soln. acidified and reduced with a Zn or Bi amalgam, and then titrated with KMnO_4. V. KALICHEVSKY																									
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																									
13000 539-83194													13000 83-109												

PROCESS AND PROPERTY NOTES

Bromometric method for determining total nitrogen in cyanamide. M. L. CHURCH-
LEYTSEKII AND R. D. FAIR. *J. Applied Chem. (U. S. S. R.)* 4, 605-71(1931) - CACN;
is decomposed with H₂SO₄ into (NH₄)₂SO₄ (the use of catalysts is superfluous, but mix-
ing of the sample with K₂SO₄ before adding the acid is important to avoid loss of N).
The method is based on the following reaction: (NH₄)₂SO₄ + 3Br₂ + 8NaH₂PO₄ =
N₂ + 6NaBr + Na₂SO₄ + 8NaH₂PO₄. V. KALICHEVSKY

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Rapid analysis of Khibin ores by the method of insoluble residues. M. L. Chupel'evskaya, O. S. Voznesenskaya and K. D. Fatah. *Zurnal'nyi Tsif. 1932*, No. 3, 16-21; (*Chem. Zentr.* 1932, II, 3140); cf. C. A. 27, 5678.—The Khibin ores consist essentially of apatite, melphite, titanomagnetite, egerite and sphene. The indirect method suggested for the detn. of Al_2O_3 depends upon the different behavior of the complexes contained in the ore toward 20% HCl, so that the P_2O_5 , Fe_2O_3 and TiO_2 contents and insol. residue are detd. directly and the Al_2O_3 content is then calcd. W. A. Mauer

W. A. BLOOM

A 30-36 A METALLURGICAL LITERATURE CLASSIFICATION

81C41 57M05, 57M10

147.282 04

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011129

0125 0300127

43:111 Del C47 15

UNCLASSIFIED AND CONTROLLED INFORMATION

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More rapid analyses of phosphates. M. I. Cherepnevskii, *Zhurnal Khim. Fiz.* 1932, No. 6/6, 207-208; *2759, 1034, 11, 3282*; cf. C. A. 20, 6213⁹.—About 2.5 g. of the phosphate is boiled 30 min. with 60-70 cc. of 20% HCl, and after cooling dil. with water and filtered into a volumetric flask. The residue is well washed, ignited and weighed, then decompd. with Na₂CO₃ and after sepn. of SiO₂ added to the first filtrate and washings. In this initial ext. the PO₄ is detd. by the citrate or the molybdate method. For the detn. of Ca (modified Chapman method) 5 or 10 cc. of the initial ext. is dil. to 50 cc., and 10 cc. concd. oxalic acid soln., 10 cc. HCl and 3 drops methyl orange added. After diln. to 300 cc. this is heated to boiling, 10% NH₄ soln. added until the indicator changes, the soln. boiled another min. and then allowed to stand 2 hrs. The ppt. is filtered off, dissolved in 10 cc. 10% H₂SO₄, and titrated with permanganate. For the detn. of Fe 80 cc. of dry Zn amalgam (as a reducing agent) and 40 cc. of the initial ext. are shaken 5-8 min. in a CO₂-filled test tube fitted with a ground glass stopper. After the ppt. has settled 25 cc. of the supernatant soln. is titrated with 0.02 N KMnO₄. Al is detd. by pptn. as either hydronide or phosphate. Mg can be detd. as Mg-NH₄PO₄ in the filtrate from the Ca pptn. Detns. of SiO₂, F, CO₂, TiO₂ and alkalis are carried out on the original substances by the usual methods. W. A. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1326 02476

SELECTED ONE DAY

1326 02476

SELECTED ONE DAY

ca

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The bromine method for the determination of nitrogen in technical products and in fertilizers. M. I. Shubakov, L. S. I. Pordnyukova and R. D. Fom. *Izv. Akad. Nauk SSSR, Khim. Prikl. Khim.* (Moscow) No. 92, 168-76 (1972). In detg. N present as NH_4 salt by the Br $_2$ method, as outlined by L. (preceding abstract), the pH of the medium is important. The most satisfactory reaction is in the pH interval of 7.5 to 9.5. The authors suggest the use of buffer phosphate solns. in place of the NaHCO_3 used by Levi. In the presence of Fe^{+++} some of the NH_4 may be oxidized to NO_2 . By adding PO_4 the Fe^{+++} effect is eliminated.

J. S. Joffe

ASB-35.4 METALLURGICAL LITERATURE CLASSIFICATION

CA

PROCESSING AND REPRODUCTION INDEX

7

The bromine method in determining total nitrogen in calcium cyanamide. M. L. Chuvpikova and R. D. 177-80 (1932).—To 5 g. of CaCN_2 in a 500-cc. Kjeldahl flask add 15 g. of K_2SO_4 mix, and add 50 cc. of concd. H_2SO_4 . Heat slowly over an open flame for 30 min. and then keep slowly boiling for 45 min. Transfer the soln. to a 500-cc. measuring flask, make up to the mark and take 50 cc. of soln. for the analysis, first filtering if necessary.

1.8 fold

ASAC-514 METALLURGICAL LITERATURE CLASSIFICATION

1000-179-01194

ca

7

Determination of nitrates by the bromine method. M.
 I. Chagalevskii and R. A. Fiskina. *Trans. Sci. Int.*
 (Moscow) No. 92, 180-4 (1932).—By means of
 Al powder (3 g. for 0.23 g. KNO_3 in 30 cc. of 10% H_2SO_4
 sol.) the nitrate is reduced to NH_4 . J. S. Joffe

ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

7

YANA analysis of the Khibini ores according to the method of insoluble residues.
II. M. L. Chernyavetskii, O. S. Voznesenskaya and R. D. Fain. Zverovskaya Lab.
1933, No. 5, 6-11.—The residue from soln. in 40% boiling HNO₃ is R^I, that from 4%
HCl is R^{II}. Then, percentage of Al₂O₃ = 0.775 (R^I - R^{II}) + 1.65 and percentage of
P₂O₅ = 40.05 - 0.987 R^I + 0.566 R^{II}.

M. C. de Mohai

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSING AND PROPERTIES INDEX																																																			
15																																																			
Influence of pH of citrate solutions on determination of assimilable phosphoric acid in fertilizers. G. S. Blyakher and M. L. Cherepenevskii. <i>Zemledel'sk. Lab.</i> 3, 583-7 (1934); cf. C. A. 30, 2294².—The soly. of superphosphates and of $Ca_3(PO_4)_2$ in citrate solns. varies inversely with the pH of the latter, while that of CaH_2PO_4 and $Fe-PO_4$ is independent of pH. The pH of aq. exts. of fertilizers varies inversely with their acid phosphate content. B. C. A.																																																			
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1ST AND 2ND QUANTILES										3RD AND 4TH QUANTILES									
PROCESSES AND PROPERTIES INDEX																			
OK 15 Analytical control methods in the manufacture of superphosphate. M. L. Chepuravskii and R. N. Bratskii. <i>Vys. Sch. Inst. Tekhn.</i> (U. S. S. R.) No. 114, 1-76 (1964).—A revised edition of standard methods used in the control lab. of the superphosphate industry. J. S. Joffe																			
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION																			
1ST QUANTILE										2ND QUANTILE									
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Problems of phosphate analysis. Free acidity of superphosphate. M. L. Chepelevskii. *Zavodskaya Lab.* 6, 200-4 (1957).—Ten g. of superphosphate is shaken with 200 ml. of H₂O for 30 min. and the suspension is filtered. Fifty ml. of filtrate is added to 200 ml. and titrated with 0.1 N NaOH in presence of dimethyl yellow. B. C. A.

ASB-15A DETALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSING AND PROPERTIES INDEX

100 AND 4TH ORDERS

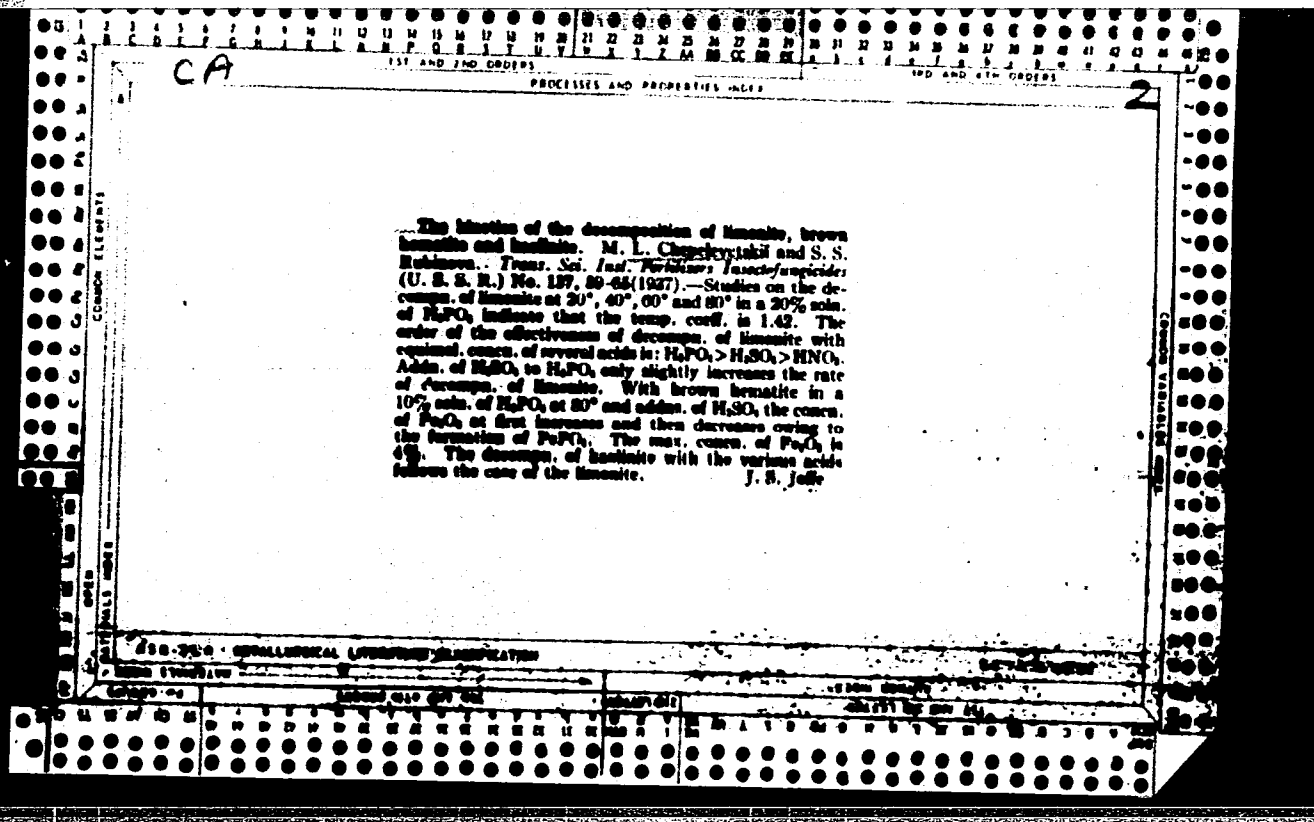
...Stability of sodium fluorosilicates in phosphate solutions and the etching-out effect of sodium chloride. M. L. Chepelevitch and Ts. Bol'is. *J. Applied Chem. (U. S. S. R.)* 10: 1182-83 (in German 1183) (1937). - The soly. of Na_2SiF_6 in water at 40°, 60° and 80°; in P_2O_5 solns. (0-25%) at 40° and 80°; and in P_2O_5 solns. contg. 2 and 4% by wt. NaCl at the same temps. was investigated and data are tabulated. A nomogram is given which permits calcul. of the theoretical percentage of Na_2SiF_6 ppt. Six refer-ences.

A. A. Podolsky

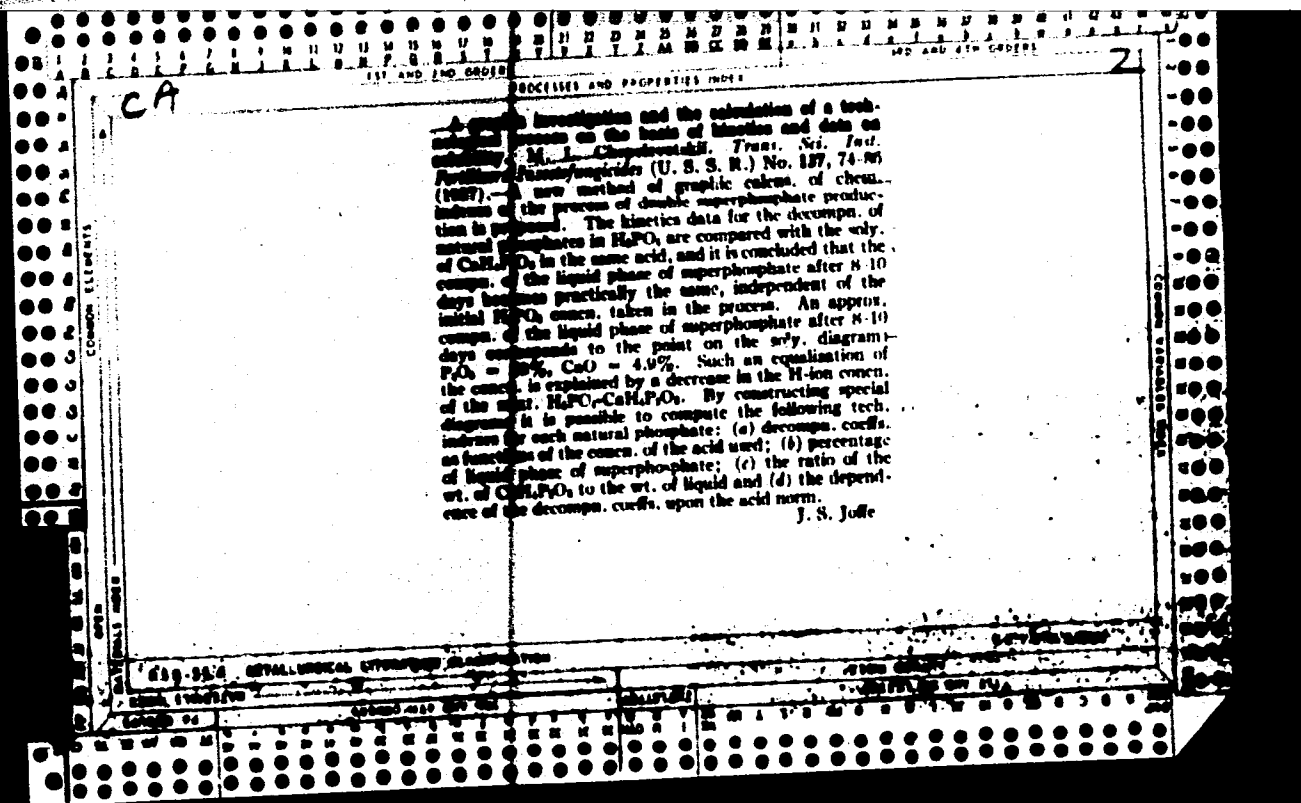
ASM-31A METALLURGICAL LITERATURE CLASSIFICATION

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COMMON ELEMENTS																										COMMON VARIABLE ELEMENTS																									
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PROCESSES AND PROPERTIES INDEX --The theory of acid decomposition of minerals: apatite M. L. Chuprikovskii. <i>Trans. Sci. Inst. Fertilizers (Izucheniye)</i> (U. S. S. R.) No. 137, 10-35 (1937).-- The kinetics of the decompos. of apatite obey the classical laws of Nernst, Brønner, van't Hoff-Arrhenius: the speed of decompos. at any given moment is proportional to the H-ion concn. and to the surface of the mineral, and is a logarithmic function of the reciprocal of the abs. temp. The velocity const. for the temps. 20°, 40°, 60° and 80° were found. A math. analysis is given for a no. of cases of integration of differential equations of the kinetics of the reactions. It is shown that the velocity const. of the decompos. of apatite with H₂PO₄ can be calc'd. from the equation analogous to that used in analyzing data on catalysis when "blocking action" due to the presence of reaction products is apparent. The blocking action in this case is due to the dissolved salts which suppress the lumination of H₂PO₄. The decompos. of flotation concentrate of apatite was studied at temps. of 20°, 40°, 60° and 80°. A method of calcg. the change in the reacting surface of a mixture of various grain size is proposed. The calcn. is based on the decompos. rate curve. The presence of a coarse fraction (80-150 mesh) in the concentrate slows down the reaction of decompos. in the final stages. J. S. Loff.																																																			
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1ST AND 2ND CODERS										3RD AND 4TH CODERS									
PROCESSES AND PROPERTIES INDEX																			
CA The kinetics of the decomposition of phosphorites. M. I. Chudakovskii and S. S. Rubinova. <i>Trans. Sci. Fed. Res. Inst. Geochem. (U. S. S. R.)</i> No. 137, 66-72 (1957).—Qual. characteristics of flotation phosphorites do not affect the decompn. rate. All the samples tested (from 3 sources) decompd. rapidly with 20% H_2PO_4 even at 20°. J. S. Joffe																			
U. S. S. R. GEOLOGICAL LITERATURE ABSTRACTS																			



1ST AND 2ND PERIODS																										3RD AND 4TH PERIODS																									
PROCESSING AND PROPERTIES INDEX																																																			
<i>See</i> The rate of crystallization of ferric phosphates from supersaturated solutions. M. J. Chudakovskii and T. A. Kryukova. <i>Trans. Sci. Inst. Fertilizers and Isotofosfates</i> (U. S. S. R.) No. 137, 102 (1967). Fe(OH)₃ and H₂PO₄ were used in prep. the Fe phosphates for study at 70°. The crystn. curves are divided into 3 periods: latent, rapid crystn. and residual crystn. There is a definite logarithmic relation between the latent period and the satn.: $\log t = (a/A) - b$, where t is time of the latent period, A is satn. and a and b are consts. Addn. of crystals of Fe phosphate practically eliminate the latent period. This period is also reduced by the addn. of alk. sulfates and other constituents. J. S. Joffe																																																			
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